

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/005286 A1

(51) International Patent Classification⁷: B65D 85/68,
B60P 3/40

(21) International Application Number:
PCT/DK2004/000497

(22) International Filing Date: 9 July 2004 (09.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PA 2003 01051 10 July 2003 (10.07.2003) DK

(71) Applicant (for all designated States except US): LM
GLASFIBER A/S [DK/DK]; Rolles Møllevej 1, DK-6640
Lunderskov (DK)

(72) Inventor; and

(75) Inventor/Applicant (for US only): GRABAU, Peter
[DK/DK]; H.C. Petersensvej 10, DK-6000 Kolding (DK).

(74) Agent: CHAS. HUDE A/S; H.C. Andersens Boulevard
33, DK-1780 Copenhagen V (DK).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

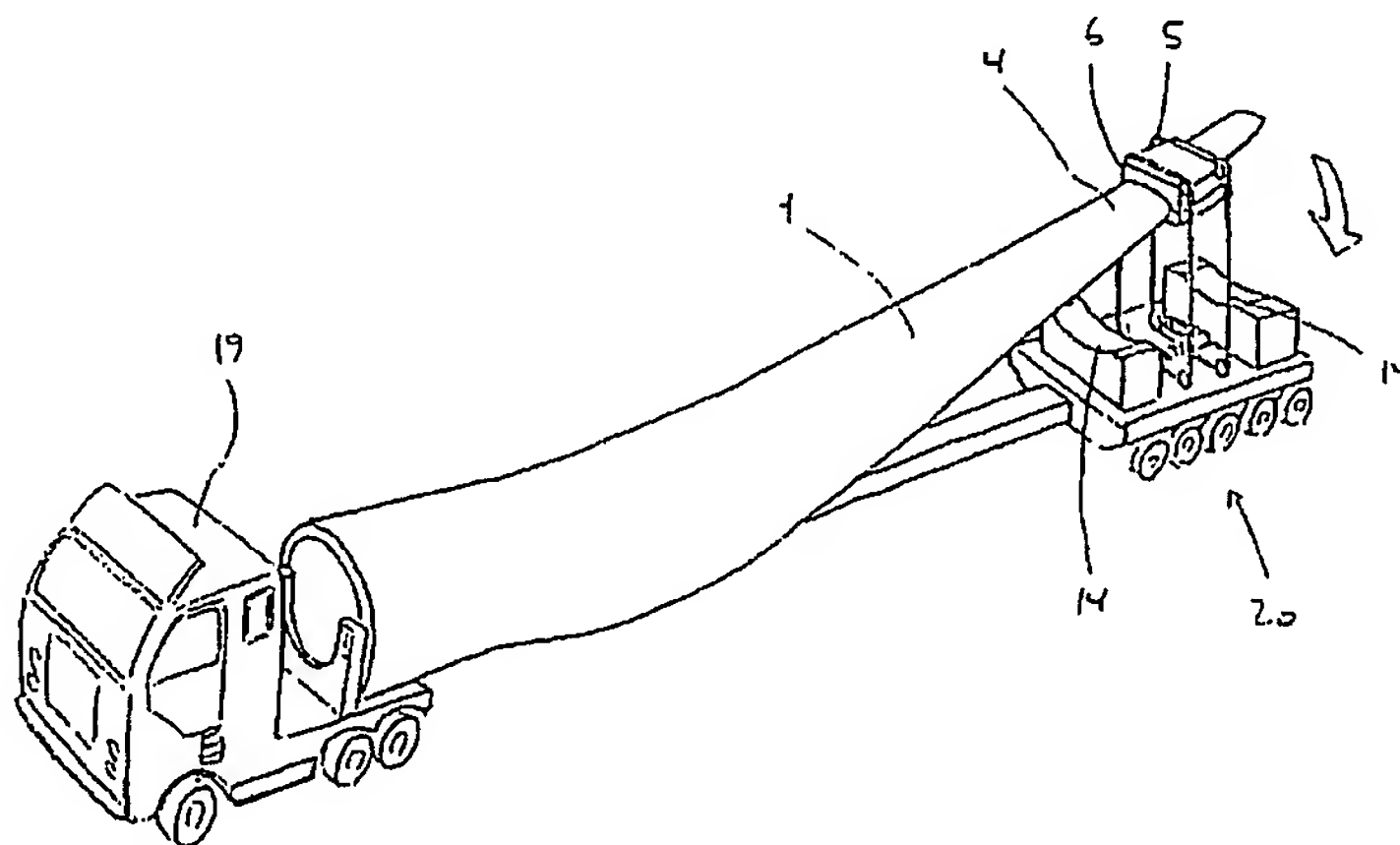
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: TRANSPORTING AND STORING CURVED WIND TURBINE BLADES



(57) Abstract: A method of transporting and storing a wind turbine blade (1) including a blade root (10) and a blade tip (4), where the wind turbine blade curves in the unloaded state in such a manner that the blade (1) presents a substantially concave face (30) and a substantially convex face (12), and such that said blade tip (4) is spaced apart from the longitudinal central axis (28) of said blade root (10). By the method, the wind turbine blade (1) is prestressed by means (2, 5, 6, 9, 13, 16, 17, 21, 22, 23, 24, 25, 26, 33) at a distance from the blade root (10) in such a manner that the blade tip (4) is brought closer to the longitudinal central axis (28) of the blade root (10). The invention also relates to a curved wind turbine blade (1) being provided with inner ballast tanks (21) at a distance from the blade root (10), whereby the blade is prestressed by filling said ballast tanks in such a manner that the blade tip (4) may be brought closer to the longitudinal central axis (28) of the blade root (10). The invention further relates to an apparatus including prestressing means for loading a curved blade at a distance from the blade root (10) in such a manner that the blade tip (4) is brought closer to the longitudinal central axis (28) of the blade root (10).

WO 2005/005286 A1